

**ABSTRACT****Method and device for determining a reference value of a response, in particular of a mode S response received by a secondary radar**

The present invention applies to the surveillance of, in particular civil, air traffic, and more particularly, to cooperative aircraft ground systems which make it possible to pinpoint in radial distance and in azimuth the aircraft present in a certain volume and to interrogate them.

5       The invention makes it possible to determine a reference value of a response contained in a reception signal of a secondary radar, doing so even in the presence of strong pollution, in particular in the event of nesting between mode S responses.

For this purpose:

- the position of the pulses present is tagged (IMP) in the reception signal (SRC);
- 10 - potential positions of pulses of the response considered are determined (FLT);
- time windows are selected, each time window tagging in the reception signal a stable part (STB) of a pulse whose position has been tagged and whose tagged position coincides with a determined potential position, the reference value being the value taken predominantly by samples of the reception signal, these samples being situated in the
- 15     selected time windows.

**Figure 4**